

## Customer Specification

**PART NO. 2219/23C**

## Construction

						Diameter ("in")		
1) Component 1						23 x 1 PAIR		
a) Conductor						22 (7/30) AWG Tinned Copper		0.030
b) Insulation						0.010" Wall, Nom. PVC, Semi Rigid		0.050
(1) Color Code						Alpha Wire Color Code A		
Pair	Color	Pair	Color	Pair	Color			
1	BLACK-RED	9	RED-WHITE	17	GREEN-ORANGE			
2	BLACK-WHITE	10	RED-BLUE	18	GREEN-YELLOW			
3	BLACK-GREEN	11	RED-YELLOW	19	WHITE-BLUE			
4	BLACK-BLUE	12	RED-BROWN	20	WHITE-BROWN			
5	BLACK-BROWN	13	RED-ORANGE	21	WHITE-ORANGE			
6	BLACK-YELLOW	14	GREEN-BLUE	22	WHITE-YELLOW			
7	BLACK-ORANGE	15	GREEN-WHITE	23	BLUE-BROWN			
8	RED-GREEN	16	GREEN-BROWN					
c) Pair						2/Cond Cabled Together		
(1) Twists						8.0 Twists/foot (min.)		
2) Cable Assembly						23 Components Cabled		
a) Twists						1.8 Twists/foot (min.)		
b) Orientation						Components to be arranged from INSIDE LAYER-to-OUTSIDE LAYER		
3) Shield						Alum/Mylar Tape, 20% Overlap (min.)		
a) Foil Direction						Foil Facing Out		
b) Drain Wire						22 (7/30) AWG Tinned Copper		
4) Jacket						0.040" Wall, Nom. PVC		0.545 (0.573 max.)
a) Color(s)						SLATE		
b) Print						ALPHA WIRE-* P/N 2219/23C 23PR 22 AWG SHIELDED 75C (UL) TYPE CM OR AWM 2576 --- LLXXXXXX CSA TYPE CMG FT4 CE ROHS * = Factory Code Note: Product may have c(UL) or CSA markings depending upon plant of manufacture.		

Applicable Specifications

1) UL	AWM/STYLE 2576	80°C / 150 V <sub>RMS</sub>
	CM	75°C
	VW-1	
2) CSA International	CMG	60°C
	FT4	
3) CE	EU Low Voltage Directive 2014/35/EU	

# Environmental

1) CE: EU Directive 2011/65/EU(RoHS2), EU Directive 2015/863/EU (RoHS3)	
	This product complies with European Directive 2011/65/EU (RoHS Directive) of the European Parliament and of the Council of 8 June 2011 and the amending Directive 2015/863/EU of 4 June 2015 . No Exemptions are required for RoHS Compliance on this item.
2) REACH Regulation (EC 1907/2006)	
	This product does not contain Substances of Very High Concern (SVHC) listed on the European Union's REACH candidate list in excess of 0.1% mass of the item.
3) California Proposition 65	This product may contain substances known to the State of California to cause Cancer or Reproductive Harm, but is exempt from labeling based on the Consent Judgement. See the Alpha Wire website for more detail.

# Properties

Physical & Mechanical Properties	
1) Temperature Range	-20 to 80°C
2) Bend Radius	10X Cable Diameter
3) Pull Tension	258 lbs. (max.)
Electrical Properties	
(For Engineering purposes only)	
1) Voltage Rating	150 V <sub>RMS</sub>
2) Mutual Capacitance	24.2 pF/ft @1 kHz, Nominal
3) Ground Capacitance	44 pF/ft @1 kHz, Nominal
4) Characteristic Impedance	78 ω
5) Inductance	0.18 μH/ft, Nominal
6) Conductor DCR	16.6 ω/1000ft @20°C, Nominal
7) OA Shield DCR	9.2 ω/1000ft @20°C, Nominal

# Other

Packaging	Flange x Traverse x Barrel (inches)
a) 1000 FT	30 x 14 x 12 Continuous Length
b) 500 FT	18 x 14.25 x 8 Continuous Length
c) 100 FT	18 x 9 x 8 Continuous Length
	Spool dimensions may vary slightly.

[www.alphawire.com](http://www.alphawire.com)

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## EU/UK/China ROHS CERTIFICATE OF COMPLIANCE

To Whom It May Concern:

Alpha Wire Part Number: 2219/23C

2219/23C, RoHS-Compliant Commencing With 8/1/2005 Production

Note: all colors and put-ups

This document certifies that the Alpha part number cited above, including all packaging materials, is manufactured in accordance with Directive 2011/65/EU of the European Parliament, better known as the RoHS Directive (commonly known as RoHS 2), with regards to restrictions of the use of certain hazardous substances used in the manufacture of electrical and electronic equipment. This certification extends to amending Directive 2015/863/EU which expanded the list of restricted substances to 10 items (commonly known as RoHS 3). This product also complies with UK - RoHS. The reader is referred to these Directives for the specific definitions and extents of the Directives. **No Exemptions are required for RoHS Compliance on this item.** Additionally, Alpha certifies that the listed part number is in compliance with China RoHS "Marking for Control of Pollution by Electronic Information Products" standard SJ/T 11364-2014. This product is also in compliance with China RoHS 2 per GB/T 26572-2011.

### Substance

Lead  
Mercury  
Cadmium  
Hexavalent Chromium  
Polybrominated Biphenyls (PBB)  
Polybrominated Diphenyl Ethers (PBDE) ,  
Including Deca-BDE  
Bis(2-ethylhexyl) phthalate (DEHP)  
Butyl benzyl phthalate (BBP)  
Dibutyl phthalate (DBP)  
Diisobutyl phthalate (DIBP)

### Maximum Control Value

0.1% by weight (1000 ppm)  
0.1% by weight (1000 ppm)  
0.01% by weight (100 ppm)  
0.1% by weight (1000 ppm)  
0.1% by weight (1000 ppm)  
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The information provided in this document and disclosure is correct to the best of Alpha Wire's knowledge, information and belief at the date of its release. The information provided is designed only as a general guide for the safe handling, storage, and any other operation of the product itself or the one that it will become part of. The intent of this document is not to be considered a warranty or quality specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product.

Authorized Signatory for the Alpha Wire:

Dave Watson, Director of Engineering 10/30/2024

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